

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

UPLAND WILDLIFE HABITAT MANAGEMENT

(acre)

CODE 645

Texas Supplement, Zone 1

LESSER PRAIRIE CHICKEN

HABITAT REQUIREMENTS

GENERAL

The lesser prairie chicken is limited to two areas of Texas. The northern population is located in the Eastern Panhandle with existing and potential habitat in Ochiltree, Lipscomb, Roberts, Hemphill, Gray, Wheeler, Donley and Collingsworth Counties. The southern population is located in the South Plains with existing and potential habitat in portions of Bailey, Lamb, Cochran, Hockley, Yoakum, Terry, Gaines and Andrews Counties. This habitat is part of relatively large areas of mostly sandy rangeland. The Eastern Panhandle habitat is mainly shinnery oak/sand sagebrush mid to tall grass plant communities. The South Plains habitat is mainly shinnery oak midgrass plant communities. The occupied range has been reduced to 10 to 20 percent of historical range.

FOOD

The lesser prairie chicken's diet consists of insects, seeds, green plant material, mast and cultivated grain crops. Insects are the primary food source of young birds and during spring

and summer up to 50 percent of the diet of adults. Their diet includes shinnery oak acorns, broom snakeweed leaves, skunkbush sumac leaves, sand sagebrush leaves, sixweek fescue, dayflower leaves, western ragweed leaves and eveningprimrose leaves. Other forbs of importance include wild buckwheat, queens delight, beard-tongue and wild four-o'clock. Cultivated grain crops utilized are mainly grain sorghum and wheat.

COVER

One unique feature of the lesser prairie chicken is its use of leks. The leks are utilized for courtship activities in the spring and fall and other social activities. Leks generally have sparse vegetation and can be areas of native forbs, short grass, oil well pads, roads and cropland. In most areas sufficient sites for leks are present and will be used year after year unless disturbed by man or vegetation becomes to dense. The leks are at the center of the lesser prairie chicken habitat.

Good nesting cover is tall bunchgrasses such as sand bluestem, little bluestem, indiangrass and switchgrass. Nesting cover should occur in sufficient size and be close to the lek sites and interspersed with quality brood rearing cover. Most studies have shown that quality nesting

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cover should be a minimum of 20 inches in height. Brood rearing habitat needs larger amounts of bare ground with overhead cover. This includes areas of forbs, shinnery oak and/or sand sagebrush.

WATER

Lesser prairie chickens water requirements are met from the food consumed, dew, and any available standing water.

HABITAT ARRANGEMENT AND SIZE

The minimum land area needed to maintain a breeding population of lesser prairie chickens is an area of prime nesting and brood-rearing cover approximately 1,280 acres in size, surrounded by a minimum of 10,000 acres (at least 60% rangeland) of feeding and loafing habitat. All habitat components should be in relatively close proximity. Brood rearing cover must be close to nesting cover. Ideal interspersions of habitat components consist of a complex of shrubs (sand sagebrush, sand shinnery oak, sand plum and or skunkbush sumac) and tall and mid-grasses (switchgrass, little bluestem, sand bluestem, indiangrass and sideoats grama) growing in various stages of development on open rangeland.

HABITAT MANAGEMENT TECHNIQUES

BRUSH MANAGEMENT

In most cases, shinnery oak and sand sagebrush control will improve lesser prairie chicken habitat when they exceed 30% canopy cover over the majority of the habitat. Suppression rather than eradication should be the goal in most cases. Tebuthiuron use for suppression should be at the $\frac{1}{2}$ # to $\frac{3}{4}$ # rates. At these lower rates entire pastures can be treated. The 1 # rate can be utilized for higher levels of control. When the 1 # rate is used at least 30% of the pasture should not be treated and treatment should be done in patterns. For shinnery oak suppression Triclopyr at a rate of $\frac{1}{2}$ to 2 pints per acre is another option. Other treatments of sand sagebrush should follow rates in the Brush Management Standard and

Specification and be carried out using patterns or at the lower rates for treating entire pastures. During sand sagebrush control care should be taken to protect sand plum thickets and areas of skunkbush sumac, as much as possible. Treatment should not be planned if good quality perennial grasses are not present in the understory. If they are not present removal of the brush (especially shinnery oak) can produce very undesirable grass communities. Rates of tebuthiuron, greater than $\frac{1}{2}$ # per acre, can have an adverse effect on some grass species and forbs utilized by lesser prairie chicken. Extreme caution must be used when planning treatment of any Sand Hill Range Sites due to high risk of wind erosion. These are generally mapped as Tivoli soils. In shinnery oak control taller mottes should not be treated. Any brush management should result in a mosaic of treated areas and untreated areas distributed over the habitat.

CONSERVATION COVER

This practice is generally applied to land enrolled in the Conservation Reserve Program. It has the potential to improve overall lesser prairie chicken habitat. Seeding mixtures should be native tall and mid-grasses with a component of quality forbs, legumes and if needed woody species. Development of food plots, planted to grain sorghum or wheat can be a tool that provides supplemental food during winter months.

PRESCRIBED BURNING

Burns can be conducted on a 5 to 7 year cycle. These should be late winter/early spring burns for annual forb growth or late spring to promote perennial bunchgrass growth. Burning 100 to 300 acre strips or blocks can produce the desired mosaic effect. Extreme caution must be used when planning burns on areas of deep sand (Sand Hill range sites) due to high risk of wind erosion. All burns must be carried out according to an approved NRCS burn plan.

PRESCRIBED GRAZING

Duration and intensity of grazing must be balanced to increase or maintain good nesting and brood-rearing cover. A prescribed grazing schedule must be prepared for all pastures.

The schedule should include forage quantity, livestock numbers, supplemental feed requirements, grazing plan and a drought plan. Table 1 is a guide for developing grazing plans for maintenance or improvement of rangeland plant communities. Grazing plans must remain flexible to change management as needed. Never use absolute rigid management. Never lock in an absolute stocking rate, set grazing periods or a rigid day to rotate. These decisions must be based on forage, livestock and lesser prairie chicken needs. To improve or develop grazing systems fences and water development may be needed. These should be constructed and installed according to NRCS conservation practice standards.

RANGE PLANTING

When seeding is necessary to improve very degraded rangeland or convert other landuses to rangeland follow NRCS conservation practice standards. Seeding mixtures must be tailored to the site. Mixtures should be as close to climax as possible. Do not use introduced species. Adapted forbs and legumes will enhanced the mixture for lesser prairie chicken.

TREE/SHRUB ESTABLISHMENT

In some situations shrubs may be needed to improve lesser prairie chicken habitat. Prior to planning shrub establishment a (NRCS, TP&W or USF&WS) biologist should be consulted for proper species selection, amounts and locations. All plantings should follow NRCS conservation practice standards.

UPLAND WILDLIFE HABITAT MANAGEMENT

To assist in creating, maintaining or enhancing food and cover requirements for lesser prairie chicken the following can be applied. Use tillage practices on cropland that leaves waste grain on the soil surface during winter periods. Plant plots of grain sorghum or wheat (at least 5

acres in size) within 1 mile of leks to provide supplemental food sources. Disk strips near leks on a 2 to 3 year rotation. Maintaining water during drought periods may be beneficial. Clearing overgrown vegetation on leks may enhance their value and use. New lek sites could be developed if needed.

USE EXCLUSION

Excluding livestock from nesting and brood rearing habitat may improve these areas. Exclusions should be a minimum of 160 acres in size for nesting and brood rearing habitat.

REFERENCES

Coffman, Charles. 1983. Lesser prairie chicken. Animal guides for Texas. USDA Soil Conservation Service, Temple. pp. 60-62.

Litton, G., R.L. West, D.F. Dvorak and G.T. Miller. 1994. The lesser prairie chicken and its management in Texas. Bk N7100-025. Texas Parks and Wildlife Department, Austin.

Taylor, M.A. and F.S. Guthery. 1980. Status, ecology, and management of the lesser prairie chicken. General Technical Report RM-77. USDA Forest Service, Fort Collins, Colo.

_____. 1999. Lesser prairie chicken. Fish and Wildlife Habitat Management Leaflet 6. USDA Natural Resources Conservation Service, Washington, DC.

APPROVAL

/s/ Gary Valentine

State Wildlife Biologist

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TABLE I**GRAZING MANAGEMENT GUIDELINES FOR RANGELAND**

RANGE SIMILARITY PERCENT OF CLIMAX	REST PERIOD DURING GROWING SEASON 1	PERCENT OF ANNUAL PRODUCTION HARVESTABLE 2
0-25	Full Season 1 Year in 2	30
25-50	120 Days 1 Year in 3	40
50-75	90 Days 1 Year in 3	50
75-100	90 Days 1 Year in 4	50

1 - Some Planned Grazing Systems may not meet these rest periods but can be used if meets FOTG requirements

2 – Dormant season grazing can increase usage by 10%.